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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/845,064	04/27/2001	Veronique Gruber	18433/2002	1669

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EXAMINER

QIAN, CELINE X

ART UNIT

PAPER NUMBER

1636

DATE MAILED: 03/12/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/845,064

Applicant(s)

GRUBER ET AL.

Examiner

Celine X Qian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-24 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Claims 17-24 are pending in the application.

Election/Restrictions

Applicant's election of Group III in Paper No. 11 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 1-16, 25-53 and 55 are cancelled. Accordingly, claims 17-24 are currently under examination.

Claim Objections

Claim 19 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 17 is drawn to a vector consisting a number of elements, whereas claim 19 further comprises a promoter and a terminator which are not recited in claim 17. Therefore, claim 19 fails to further limit claim 17.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Regarding claims 19-24, the recitation of "a nucleic acid sequence coding for at least one expression promoter and at least one transcription terminator" renders the claim indefinite because nucleic acid sequences do not code promoter or terminator.

Regarding claims 21 and 22, the recitation of "wherein said expression promoter is a plant expression promoter" renders the claims indefinite because it is unclear whether it means a promoter functions in a plant or isolated from a plant gene. As such, the metes and bounds of the claims cannot be established.

Regarding claims 23 and 24, the recitation of "wherein said transcription terminator is a terminator of a plant cell" renders the claims indefinite because it is unclear whether it is a terminator isolated from a plant gene or a terminator functions in a plant. As such, the metes and bounds of the claims cannot be established.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 17-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomasshow et al. (6,417,428), in view of Valla et al (1991, plasmid. Vol 25, pages 131-136).

Thomasshow et al. teach a binary cloning vector pMEN020 comprising a origin of bacterial replication ori-322, a vegetative origin of replication ori-V, the left border of T-DNA, a chimeric gene as selection marker (comprising cauliflower mosaic virus 35S promoter, neomycin phosphotransferase type II gene, a 3' non translated region of the nos, enhanced Ca MV 35S promoter and multi-cloning site), right border of T-DNA and bacterial spectinomycin resistance gene. Thomasshow et al. also teach that this plasmid does not contain vir genes encoding proteins essential for the transfer and integration of the target gene inserted in the T-DNA region. Thomasshow et al. further teach that this plasmid requires the trfA gene product to replicate in Agrobacterium (col.27, lines 22-53). Moreover, Thomasshow teach a strain of Agrobacterim comprising a modified Ti plasmid encoding trfA gene as a helper vector the pMEN020 vector to replicate in Agrobacterim (col.27, lines 54-65). However, Thomasshow et al. do not teach a vector comprising elements of pMEN020 and trfA gene on the same vector.

Valla et al. teach that vector constructs comprising trfA gene in cis or trans from RK2 origin (Abstract, and page136, 2nd col., 2nd paragraph, and Figure 1). Valla et al. also teach that mutant trfA proteins exhibit temperature sensitive expression (abstract, and Table 1). Valla et al. further teach that the temperature sensitive phenotype is influenced by copy number of the trfA transcripts, wherein the cis vectors are low copy number and trans vectors are high copy number (abstract).

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It would have been obvious to one of ordinary skill of art to make a synthetic binary vector comprising elements of the pMEN20 vector and further comprising the trfA locus in cis-position because of the combination teaching of Thomasshow et al. and Valla et al. The ordinary skill of the art would be motivated to do so because of the teaching of Valla et al., who teach that copy numbers of trfA gene product influence the temperature sensitive phenotype of some of the trfA mutants, therefore, manipulating the vectors comprising trfA in cis position or trans position can change the activity of temperature sensitive mutants of trfA. The level of skill in the art of molecular cloning is high. Absent evidence from the contrary, one of ordinary skill of the art would have reasonable expectation of success to add trfA gene to the vector of pMEM20. Therefore, the invention would have been *prima facie* obvious to one of ordinary skill of art at the time the invention was made.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Celine X Qian whose telephone number is 703-306-0283. The examiner can normally be reached on 9:00-5:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Remy Yucel Ph.D. can be reached on 703-305-1998. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 for regular communications and 703-305-3014 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Anne-Marie Falk
ANNE-MARIE FALK, PH.D.
PRIMARY EXAMINER

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Celine Qian, Ph.D.

March 5, 2003